ABSTRACT

A paramyxovirus vector capable of Extransfecting foreign genes and having a replication capacity, is provided. A Sendai virus vector comprising a foreign gene can be constructed by inserting a foreign gene between the viral genes of the Sendai virus genome. These Sendai viruses have a replication capacity and express the foreign gene in transfected cells. The expression level of the foreign gene is higher towards the 3' end of negative strand RNA, and especially, a high level of expression is obtained when the foreign gene is inserted before the NP gene, and between P gene and M gene. Conversely, the expression decreases towards 5' end of negative strand RNA, and especially, a relatively low level of expression is obtained when the when the foreign gene is inserted between HN gene and L gene, and between F gene and HN gene. Thus, the vector of the invention enables the regulation of the expression level of a foreign gene. The vector is useful for gene therapy due to its safety, high gene transfer efficiency, and capacity to express a foreign gene at a high level.

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